

ROADWAY DESIGN

- _____ Rural Roadway Design
- _____ Urban Roadway Design
- _____ Interchange Design
- _____ (submittal should include sample (plans) showing MicroStation & GEOPAK capabilities)
- _____ Roadway Lighting

SURVEYING

- _____ GPS (sample should include equipment list and a sample of static network documentation & RTK site calibration)
- _____ SUE (sample should include equipment list)
- _____ Route Location Surveys (sample should include equipment list)
- _____ Vangarde
- _____ High Density Laser Scanner (sample should include equipment list)
- _____ Hydrographic Surveys (sample should include equipment list)

HYDRAULICS

- _____ Hydraulic Design – Tier I
- _____ Hydraulic Design – Tier II

STRUCTURES MANAGEMENT

- _____ Bridges - Spans under 200'
- _____ Bridges - Spans over 200'
The minimum personnel criteria requires at least two permanent engineers & a technician. Both engineers must have substantial bridge design experience & at least one of the engineers must be a Registered Professional Engineer in NC.
- _____ Electrical & Mechanical Design for Moveable Bridge Systems
- _____ Load Testing & Finite Analysis
- _____ NBIS Municipal Bridge Inspection

STORMWATER PROGRAM

- _____ Planning, design, & construction of stormwater BMPs
- _____ Water quality monitoring
- _____ Technical water quality assessments
- _____ Stakeholder facilitation
- _____ IT development to support information management, analysis, monitoring, and reporting
- _____ Watershed analysis & modeling
- _____ Public participation & outreach
- _____ Regulatory analysis & planning
- _____ Development of design standards, manuals, & performance criteria for program management

VISUALIZATION

- _____ Visualization (submittal should include sample showing visualization capabilities.)

Highway Design Branch continued on next page...

Contact Persons:

Roadway Design:

Hapsy Clymer - 919/707-6203
hclymer@ncdot.gov

Surveying:

Kathy Richardson - 919/707-6800
karichardson@ncdot.gov

Hydraulics:

Marshall Clawson - 919/707-6713
mclawson@ncdot.gov

Structures Management:

Theresa Taylor - 919/707-6415
ttaylor@ncdot.gov

Stormwater:

Matt Lauffer - 919/707-6733
mslauffer@ncdot.gov

Visualization:

David Hinnant - 919/707-7050
dbhinnant@ncdot.gov

GEOTECHNICAL ENGINEERING DISCIPLINES

GEOTECHNICAL ENGINEERING SERVICES

- _____ Roadway Foundation Investigation & Design
- _____ Structure Foundation Investigation & Design
- _____ Retaining Wall Investigation & Design
- _____ Pavement Design Investigation

GEOENVIRONMENTAL SERVICES

- _____ Hazardous Waste Site Analysis & Remediation

GEOPHYSICAL SERVICES

- _____ Geophysical Services

GEOTECHNICAL SPECIALTY SERVICES

- _____ Ground Improvement Design
- _____ Cantilever Retaining Wall Design
- _____ Anchored Retaining Wall Design
- _____ MSE Retaining Wall Design
- _____ Dam Investigation, Evaluation & Design
- _____ Landslide Investigation, Evaluation & Mitigation Design
- _____ Rock Slope Investigation, Evaluation & Design
- _____ Rock Blasting Evaluation & Design

Contact Person: Eric Williams - 919/707-6876
Ewilliams@ncdot.gov

CONSTRUCTION

_____ Roadway Construction Engineering &
 Inspection
_____ Structures Construction Engineering &
 Inspection
_____ Intelligent Transportation Systems
 (ITS) Inspection
_____ Signal Systems Inspection

_____ Construction Contract Claim Analysis
_____ Critical Path Method (CPM) Scheduling

Other: _____

Contact Person: Mickey Biedell, PE - 919/707-4803
mbiedell@ncdot.gov

ITS & SIGNALS

- _____ Signal Design
- _____ Signal System Design
- _____ Signal System Timing Development & Implementation
- _____ Signal Equipment Design/Application
- _____ Intelligent Transp System Technologies (ITS) Design
- _____ Utility Make-Ready Design

SIGNING & DELINEATIONS

- _____ Guide Sign Design – Conventional Roads
- _____ Guide Sign Design – Expressways & Freeways
- _____ Pavement Marking Plans

TRAFFIC ENGINEERING

- _____ Traffic Data Collection

CONGESTION MANAGEMENT

- _____ Traffic Impact Studies/Analyses
- _____ Independent review of Traffic Impact Studies/Analyses
- _____ Capacity Analyses (Interchanges)
- _____ Capacity Analyses (Freeways)
- _____ Capacity Analyses (Arterials)
- _____ Capacity Analyses (Intersections)
- _____ Capacity Analyses (Roundabouts)
- _____ Traffic Simulations using advanced modeling software
- _____ Corridor Studies
- _____ Interchange Modification/Justification Reports
- _____ School Traffic Operation Studies

WORK ZONE TRAFFIC CONTROL

- _____ Traffic Control Plans

Contact Person: Renee Roach, PE - 919/771-2741
rroach@ncdot.gov

**PROJECT PLANNING FOR HIGHWAY
PROJECTS**

- ☐ Categorical Exclusions
- ☐ Environmental Assessments/Finding of No
Significant Impacts
- ☐ Environmental Impact Statements

**HUMAN ENVIRONMENT UNIT
(HEU)**

- ☐ Public Involvement
- ☐ Community Impact Assessment
- ☐ Indirect & Cumulative Impacts Assessment
- ☐ Archaeological Resource Surveys
- ☐ Historic Architectural Surveys of Standing
Structures (Buildings & Bridges)
- ☐ Traffic Noise Analysis
- ☐ Air Quality Analysis
- ☐ Limited English Proficiency

NATURAL ENVIRONMENT UNIT (NEU)

- ☐ Threatened & Endangered Species Survey
& Studies
- ☐ Ecological & Biotic Community Studies
- ☐ Wetland and Stream Delineation
- ☐ Freshwater Mussel Surveys
(copies of permits & licenses must be attached)
- ☐ ICI Water Quality Assessments

(NEU) ON-SITE SERVICES

- ☐ Wetland, Stream, and Buffer Permitting
- ☐ Wetland Mitigation Site Planning
- ☐ Wetland Mitigation Site Design and
Construction Oversight
- ☐ Stream Biological Monitoring
- ☐ Stream Mitigation Site Plan
- ☐ Stream Mitigation Site Design and
Construction Oversight

Contact Person: Brenda Avant - (919) 707-6002
bpavant@ncdot.gov

- _____ Cartography
- _____ Field Data Collection
- _____ Data Conversion
- _____ Data Validation (QA/QC)
- _____ Remote Sensing Data acquisition and Processing

Contact Person: Cindy McCleary - 919/707-2151
cnmccleary@ncdot.gov

Laboratory Services

_____ Thermoplastic
_____ Lead-in/Loop Cable
_____ Asphalt Materials – Binder & Emulsified
_____ Metal Alloys
_____ Paint Coating
_____ Hot Bitumen Adhesive
_____ Glass Beads
_____ Aggregate
_____ Soils Lab Tier I
_____ Soils Lab Tier II
_____ Soils Lab Tier III

Inspection Services

_____ Inspection of Prestressed Concrete
_____ Inspection of QC/QA Asphalt Technician
_____ Inspection of QC/QA Asphalt Laboratory
_____ Equipment
_____ Inspection of Structure Coating
_____ Inspection of Timber and Wood Products

Contact Person: Phil Stanberry - 919/715-1746
pstanberry@ncdot.gov

Pavement Management

- _____ Pavement Design
- _____ Pavement Condition Surveys
- _____ Pavement Analysis
- _____ Pavement Management Systems
- _____ Pavement Deflection Testing
& Backcalculation
- _____ Skid Testing
- _____ Profilometer & Reporting
- _____ Ground Penetrating Radar
& Analysis

High Speed Highway Data Collection

- _____ High Speed Data Collection and
Processing
- _____ Quality Assurance for High Speed
Data Collection

Contact Person:

Pavement Management:

Jerry Blackwelder, PE - 919/835-8204
jblackwelder@ncdot.gov

High Speed Highway Data Collection:

Neil Mastin, PE 919/835-8212
jmastin@ncdot.gov

SAFETY & HEALTH

Training

Indoor Air Quality

Hearing Conservation

Pulmonary Function

Industrial Hygiene Air Sampling (i.e., Silica, Lead)

Ergonomics

Safety & Health

Contact Person: Melinda Dudley - 919/707-4850
mdudley@ncdot.gov

_____ Multimodal Transportation Planning
_____ Long Range Transportation Planning
_____ Travel Demand Model Development
_____ Travel Demand Model Application
_____ Air Quality Conformity
_____ Travel Survey

_____ Comprehensive Transportation
_____ Planning Development
_____ Project Level Traffic Forecasting
_____ Freight Forecasting
_____ Corridor Planning

Contact Person: Elena Talanker, PE - 919/707-0911
etalanker@ncdot.gov

_____ Erosion and Sediment Control Design
_____ Stream Restoration/Mitigation Monitoring
_____ Wetland Mitigation Monitoring

Contact Person: David B. Harris - 919/707-2925
davidharris@ncdot.gov

<p>RAIL-HIGHWAY CROSSING</p> <p>_____ Traffic Separation Studies and Crossing Evaluation Studies</p>	<p>OPERATIONS FACILITIES DESIGN AND MANAGEMENT</p> <p>_____ Passenger Station Design</p>
<p>_____ Railroad Crossing Signal and Traffic Engineering Services</p>	<p>_____ Historic Passenger Station Renovations</p>
<p>RAIL ENGINEERING</p> <p>_____ Industrial and Yard Track Design and Layout</p>	<p>_____ Passenger Platforms</p>
<p>_____ Freight Main Track Design and Layout</p>	<p>_____ Construction Administration</p>
<p>_____ Intercity Passenger and HSR Track Design and Layout</p>	<p>_____ Maintenance Facility</p>
<p>_____ Rail Transit Design and Plans Review</p>	<p>_____ Rail Facilities</p>
<p>_____ Railroad Communications and Signal System Design</p>	<p>_____ Rail Sidings</p>
<p>_____ Review and Development of Railroad Engineering Drawings, Standards and Specifications</p>	<p>_____ Landscape and Streetscape Design</p>
<p>_____ Rail Construction Project Inspection and Management</p>	<p>_____ Rail Corridor Maintenance Assessments, Surveys, and Lease Studies</p>
<p>_____ Rail Corridor Traffic Modeling and Capacity</p>	<p>PROJECT PLANNING</p>
	<p>_____ Rail Functional and Preliminary Design</p>
	<p>_____ Studies of Economic and Fiscal Impact of Rail Related Activities</p>
	<p>_____ Demand Modeling, Ridership, Revenue, Operating Costs for Commuter and Intercity Passenger Rail Operations</p>
	<p>_____ Train Performance and Rail Line Capacity Analysis</p>
	<p>_____ Technical and Negotiation Assistance in Securing Rail Lines or Corridors</p>
	<p>_____ Viability Analysis & Support Work for RR Related Projects</p>

Contact Persons:

Rail-Highway Crossing:

Greg Keel - 919/715-7892
gkeel@ncdot.gov

Rail Engineering:

Greg Keel - 919/715-7892
gkeel@ncdot.gov

Operations Facilities Design & Maint:

Michael Shumsky- 919/707-4713
mshumsky@ncdot.gov

Project Planning:

Greg Keel - 919/715-7892
gkeel@ncdot.gov

PROJECT PLANNING

_____ Feasibility Studies

Contact Persons: Derrick W. Lewis, PE - 919/707-4663
 Dlewis@ncdot.gov

Quality Enhancement	Value Engineering
<input type="checkbox"/> Process Improvement & Reengineering	<input type="checkbox"/> Team Leader (PE/CSV)
<input type="checkbox"/> Environmental Management Systems	<input type="checkbox"/> Team Facilitator (CSV)
<input type="checkbox"/> Conflict/Dispute Resolution	<input type="checkbox"/> Partial VE Study Team: Roadway Design Engineer
<input type="checkbox"/> Community and Stakeholder Involvement	<input type="checkbox"/> Partial VE Study Team: Hydraulics Design Engineer
<input type="checkbox"/> General Meeting Facilitation	<input type="checkbox"/> Partial VE Study Team: Structure Design Engineer
<input type="checkbox"/> Facilitation Training	<input type="checkbox"/> Partial VE Study Team: Geotechnical Engineer
<input type="checkbox"/> Strategic Planning	<input type="checkbox"/> Partial VE Study Team: Traffic Operations Engineer
<input type="checkbox"/> Problem Solving Facilitation	<input type="checkbox"/> Partial VE Study Team: Project Estimator
<input type="checkbox"/> Consensus Building	<input type="checkbox"/> Partial VE Study Team: Roadway Construction Engineer
<input type="checkbox"/> Change Management	<input type="checkbox"/> Partial VE Study Team: Bridge Construction Engineer
<input type="checkbox"/> Procedure Development & Documentation	<input type="checkbox"/> Partial VE Study Team: Roadway Maintenance Engineer
<input type="checkbox"/> Other (specify)_____	<input type="checkbox"/> Partial VE Study Team: Bridge Maintenance Engineer
	<input type="checkbox"/> Entire VE Study Team
	<input type="checkbox"/> Constructability Expert
	<input type="checkbox"/> Complementary Service: Information Gathering
	<input type="checkbox"/> Complementary Service: Provide Facility for Team Studies
	<input type="checkbox"/> Complementary Service: Prepare VE Study Report
	<input type="checkbox"/> Complementary Service: Formal Presentation
	<input type="checkbox"/> Complementary Service: Development of Implementation
	<input type="checkbox"/> Plans
	<input type="checkbox"/> Procedure Development & Documentation
	<input type="checkbox"/> Value Engineering Training

Contact Person:

Odessa McGlown – 919/508-1761

omcglown@ncdot.gov

Utility Engineering

- _____ Public Water Distribution Systems
- _____ Public Water Transmission Systems
- _____ Sanitary Sewer Collection Systems
- _____ Sanitary Sewer Outfall Systems
- _____ Trenchless Technology

Utility Coordination

Contact Person:

Utility Engineering/:

Roger G. Worthington, Jr., PE - 919/707-6975
rworthington@ncdot.org

Utility Coordination:

O'Hara Parker - 919/707-7171
oparker@ncdot.gov

RIGHT OF WAY

- _____ Right of Way Negotiators
- _____ Right of Way Appraisals
- _____ Relocations Assistances
- _____ Appraisal Reviews
- _____ Relocation Reviews
- _____ Project Management
- _____ Property Management

LEAD PAINT

- _____ Lead Paint Testing
- _____ Lead Paint Abatement

MOLD

- _____ Mold Testing
- _____ Mold Remediation

ASBESTOS

- _____ Asbestos Surveys
- _____ Asbestos Abatement
- _____ Asbestos Awareness Training

Contact Person:

RIGHT OF WAY

Neal Strickland - 919/707-4364
nstrickland@ncdot.gov

LEAD PAINT, MOLD, ASBESTOS

Denise Amato - 919/707-4394
dtamato@ncdot.gov

Division of Aviation

<input type="checkbox"/> Airport System Planning	<input type="checkbox"/> Avionics System Development
<input type="checkbox"/> Airport Planning/Design/Engineering	<input type="checkbox"/> Airspace Analysis
<input type="checkbox"/> Airfield Pavement Management	<input type="checkbox"/> Airport Safety Analysis/Inspection
<input type="checkbox"/> Aviation Economic Impact	<input type="checkbox"/> Aviation Flight Operations/Training
<input type="checkbox"/> Airport NAVAID/Procedure Development	<input type="checkbox"/> Airport Pavement Design
<input type="checkbox"/> Air Service Studies	<input type="checkbox"/> Airport Construction Admin/Inspection
<input type="checkbox"/> Air Cargo Studies	<input type="checkbox"/> Airport Approach/Obstruction Surveying
<input type="checkbox"/> Aviation Flight Operations Management	<input type="checkbox"/> Other:
<input type="checkbox"/> Aviation Executive Pilots (Captains & F.O.)	<input type="text"/>
<input type="checkbox"/> Aircraft Maintenance	<input type="text"/>

Contact Person: Ted Alman - 919/840-0112 ext. 239
talman@ncdot.gov

- _____ Municipal & Regional Planning Studies
- _____ Multi-use trail design, survey & layout
- _____ Bicycle map preparation
- _____ Landscape & streetscape design

Contact Person: Helen Chaney - 919/707-2608
hmchaney@ncdot.gov

Operations & Maintenance

General O&M Knowledge

- Analysis of long term durability
- O&M comparative cost analysis

Level 1 – Preliminary O&M Plan

Includes:

- Existing data collection and review
- Develop O&M management structure & organization
- Develop O&M requirements
- Preliminary O&M plan
- Preliminary OPEX
- Preliminary CAPEX

Level 2 – Final O&M Plan

Includes:

- Operations manual
- Maintenance manual
- Quality management system plan
- Safety, emergency & inspection plans
- Final OPEX & CAPEX

Level 3 – Investment Grade O&M Services

Includes:

- Due diligence report
- Bond rating agency representation
- Preparation of agreement between lenders and O&M provides
- Sensitivity testing for conditions external to project
- Revenue forecast certification
- Bond rating agency representation

Other O&M Services:

Waste Management

General Solid Waste Management Services

Construction Waste Consulting

Demolition Debris Recycling Consulting

Other Waste Management Services:

General Toll Knowledge

Infrastructure/Interface & Coordination

Toll System Planning & Design

Toll Standards Development

Toll System RFP Development

Toll Operation Marketing Strategy

Toll Collection Facilities & Equipment

Other Toll Services

Traffic and Revenue Forecasts

HOT lane studies

Contact Person:

Leslie Schuck - 919/707-4237
klshuck@ncdot.gov

PHOTOGRAMMETRY

- _____ Photogrammetric Services
(sample must include an Orthophoto in both TIF &
SID formats, the associated world files, a DGN file,
equipment and software list)
- _____ Aerial Imagery Services
(sample must include equipment list)

Contact Person: Rob Allen - 919/707-7090
roballen@ncdot.gov

ARCHITECTURE

_____ Building Design
_____ Building Construction Administration
_____ Advance Planning
_____ Programming Studies
_____ Roof Design
_____ Estimating

SITE CIVIL ENGINEERING

_____ Building Site Design

**PLUMBING, MECHANICAL &
ELECTRICAL ENGINEERING**

_____ Plumbing Design
_____ Mechanical Systems Design
_____ Commissioning
_____ Life Cycle Cost Analysis
_____ Building Envelope Design
_____ Electrical Engineering Design
_____ Lighting Control Design
_____ Fire Protection/Fire Alarm System
_____ Design
_____ HVAC
_____ Geothermal Design
_____ Energy Modeling

STRUCTURAL ENGINEERING

_____ Building Structural Design
_____ Building Foundation Design
_____ Special Inspections

SITE SURVEYING

_____ Topographic Surveying
_____ Boundary Surveying
_____ Easement Surveying

Contact Person: Shohreh Katoozian - 919/707-4551
skatoozian@ncdot.gov

DISASTER MONITORING

- _____ FEMA Compliance Monitoring & Auditing* * denotes required discipline
- _____ Disaster Recovery Planning*
- _____ Debris Removal Monitoring*
- _____ Disaster Recovery Data & Accounting*
- _____ Truck Verification/Certification*
- _____ Load Ticket Certification*

Contact Person: Don Aschbrenner - 919/733-3725
 daschbrenner@ncdot.gov

Public Transportation Division

Transit Planning Services

- _____ Economic/Fiscal Impact, Cost-Benefit Analysis, Financing Alternatives
- _____ Public-Private Venture Organizational Alternatives
- _____ Demand Modeling, Ridership, Revenue, Cost and Profitability Analysis
- _____ Community Transportation Service Plans
- _____ Transit System Consolidation Studies
- _____ Transit Facility Feasibility Studies for Transit Support Structures
- _____ Transit Support Feasibility and Implementation Studies
- _____ Other Special Transit Studies

Transit System Compliance

- _____ Conduct Compliance Reviews for Transit System

Transit System Analysis

- _____ Route and Schedule Analysis for Urban Bus Systems
- _____ Transit Service Productivity Review and Analysis

Transit System Capacity

- _____ Organizational, Operational and Administrative Assessments
- _____ Conduct Local and Statewide Needs Assessments

Transit System Technical Assistance

- _____ Statewide Circuit Rider Technical Assistance Program for Transit Systems

Transit System Grant Administration

- _____ Transit Grant Program Administration
- _____ Transit Program Funding Formula Allocation Analysis
- _____ State Management Plan Development
- _____ Program System Analysis
- _____ Program Funding Sustainability
- _____ Vehicle Specification Preparation and Analysis

Contact Person: David Bender - 919/707-4678
dpbender@ncdot.gov

Goal Setting

_____ Aspiration Goal Setting

Disparity Study

_____ Disparity study

Contact Person: Mickey Biedell, PE - 919/707-4803
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